

Please enter these calibration parameters and the Lot No. into the BioLector software!

pH calibration parameters Lot No.2403101 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	61.75	61.69	61.63	61.57	61.51	61.46	61.40
φ max	13.29	13.31	13.33	13.35	13.36	13.38	13.40
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.52	6.52	6.51	6.50	6.50	6.49	6.49

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	61.34	61.28	61.22	61.17	61.11	61.05	60.99
φ max	13.42	13.44	13.46	13.48	13.50	13.51	13.53
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.48	6.47	6.47	6.46	6.46	6.45	6.45

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	60.93	60.88	60.82	60.76	60.70	60.64	60.59
φ max	13.55	13.57	13.59	13.61	13.63	13.65	13.67
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.44	6.43	6.43	6.42	6.42	6.41	6.40

pH sensor properties

Dynamic range	pH 4.60 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.05 - 5.35 ; ± 0.1 pH at pH 5.35 - 7.25 ; ± 0.25 pH at pH 7.25 - 7.50 (batch calibration)
Response time (t90)	At 25 °C < 30 s
Drift at pH = 7	< 0.005 pH per day (sampling interval of 6 min)
Temperature range	5 °C to 50 °C
Compatibility	Aqueous solutions, ethanol, methanol (max. 5 % v/v)
Sensor stability	Sensor material can be degraded by some microorganisms
Cross-sensitivity	Reduced to ionic strength (salinity); high concentration of fluorescent molecules in the visible range can interfere (GFP, (e)YFP); complex media can cause a pH-shift (peptone, yeast extract)
Basic material	pH sensor HP8-2211-01 (at least stable for 7 days with CertiPUR-buffer) pH sensors are light-sensitive; please protect them from direct light!

pH calibration

Buffer	CertiPUR Reference Material Buffer solutions Set (pH 3.00 ± 0.02 / pH 4.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.02, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166168 (Biolector 0067)
Calibration phase offset	pH -2.42 (pH Ser. 3567, gain 7)
Date of calibration	2024-04-30

Contact us

If you have any questions, contact Beckman Coulter Customer Support Center:

- Worldwide, find out in our website at: www.beckman.de/support/technical
- In the USA and Canada, call us at 1-800-369-0333
- Outside the USA and Canada, contact your local Beckman Coulter representative

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DO calibration parameters Lot No.2403101 (BioLector XT Microbioreactor, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4852	-4770	-4689	-4607	-4525	-4444	-4362
B	38294	37646	36998	36351	35703	35056	34408
C	-34802	-34209	-33617	-33025	-32433	-31840	-31248

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-4281	-4199	-4118	-4036	-3954	-3873	-3791
B	33761	33113	32466	31818	31170	30523	29875
C	-30656	-30064	-29471	-28879	-28287	-27695	-27102

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3710	-3628	-3547	-3465	-3383	-3302	-3220
B	29228	28580	27933	27285	26637	25990	25342
C	-26510	-25918	-25326	-24733	-24141	-23549	-22957

DO sensor properties

Dynamic range	0 - 100 % oxygen
Resolution	Up to 0.1 % O ₂ (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O ₂ per day (sampling interval of 6 min)
Response time (t ₉₀)	< 30 s
Temperature range	5 – 50°C
Sensor stability	sensor material can be degraded by some microorganisms
Cross-sensitivity to	Organic solvents, such as acetone, toluene, chloroform or methylene chloride, Chlorine gas; high concentration of fluorescent molecules in the visible range can interfere (mCherry, tdTomato, dsRed, Nile red); complex media can cause a DO-shift
Basic material	Oxygen sensor PSt3-HG-1921-01_5 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	Three-point calibration at an oxygen-free environment (1.0 M sulfite system), an air-saturated environment (21% oxygen) and a pure (100%) oxygen environment (latter two with QC buffer)
Settings	BioLector protocol = pH_DO_calibration_BOH1 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166168 (Biolector 0067)
Calibration phase offset	DO -361.08 (DO Ser. 4446, gain 7)
Date of calibration	2024-04-30

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5171
Date of sterilization	2024-04-08

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